

an air bag cover skin portion comprising an outer edge connected at said inner edge of said main body skin portion, said air bag cover skin portion comprising a second plastic material having a glass transition temperature lower than a glass transition temperature of the first plastic material.

88. (Thrice Amended) A method of forming a skin for an automotive panel, the method comprising the steps of:

forming a main body skin portion adapted to cover at least a portion of the automotive panel including an opening corresponding to an air bag skin portion of the panel, said main body skin portion further comprising a first plastic material, said opening comprising an inner edge;

forming an air bag cover skin portion comprising an outer edge, said air bag cover skin portion comprising a second plastic material having a glass transition temperature lower than a glass transition temperature of said first plastic material; and

connecting said main body skin portion inner edge and said air bag cover skin portion outer edge together.

REMARKS

In the Office Action mailed November 17, 2002, claims 1-106 were rejected. The specification was objected on an informal basis for failing to provide description for the term "an opening comprising an edge". Claims 1-51 were rejected under 35 USC 112, second paragraph due to the phrase "an opening comprising an edge".

Turning first to the objection and the 35 USC 112, second paragraph rejection concerning the phrase "an opening comprising an edge", claims 1, 36, 52 and 88 have been amended to more particularly point out and distinctly claim the Applicants' invention. Specifically, the language objected to by the Examiner has been deleted and the claims have been amended to make clear that the main body skin portion includes an opening corresponding to the air bag deployment portion, wherein the opening comprises an inner edge. In addition, the claims have been

amended to recite the use of an air bag cover skin portion comprising an outer edge connected at said main body portion inner edge.

Support can be found at Col. 7, lines 43-49 which recite that “[a]s seen in Figs. 1 and 2, the main body skin portion **20** and air bag cover skin portion **22** are cast with closely adjacent **inner and outer edges 38 and 40, respectively**, for formation of the bond **25**. The **outer edge 40** defines the **periphery** of the airbag cover skin portion **22** and the **inner edge 38** defines a **border** within the main body skin portion **20** surrounding the air bag cover skin portion **22**.”

Applicants wish to elaborate further on the above, not so much for the purpose of responding to the 112 objection, but to assist in making clear some of the important features of the current invention, and as may be applicable to clarify the Examiner’s understanding of the present disclosure.

Specifically, when the main body skin portion is cast onto a heated tool, an area of the tool which is intended to be the air bag skin portion does not get contacted by the first material which forms the main body skin portion, either due to the presence of a mask or by simultaneous casting of the air bag cover skin second material with the main body skin portion first material. See, col. 3, lines 19-23. In either case, an opening having an inner edge is formed in the main body skin material. On casting of the second material to form the air bag cover skin, the opening is substantially filled with the second material forming an outer edge of the air bag cover skin. The thusly formed inner and outer edges may be joined by melting, fuse bonding or addition of a bonding material (a plastic bond **25**, column 6, line 12). Support for this can be found at column 3, lines 10-15 (“an air bag cover skin portion **bordered** by the main body portion” (emphasis added), column 3, lines 40-55, “a bond is formed that attaches the main body skin portion and the air bag cover skin portion together along their **respective inner and outer edge** while the skin portions remain on the heated shell tool. The bond may be formed by spraying a plastic bonding material between, or between and overlapping, the inner edge of the main body skin portion and the outer edge of the air bag cover skin portion”(emphasis added).

In the Specification the adjacent inner **38** and outer **40** edges are identified by reference

numbers and, further, are shown in FIGS. 1, 2, 4 and 8. In addition, the presence of an opening is shown when considering reference numbers 22 vs. 20 in FIG. 1 considering that the skin portions are either formed at different times (sequentially cast) or simultaneously cast with a gap 84 present (see FIG. 8) which is filled by a bonding material 88 (see column 10, lines 40-54). Finally, to appreciate the processing of the skin, as described in column 8, lines 6-56, "the joint pattern/partition 64 presses the joint-defining gasket 65 against the mold surface 58 to separate the powder box interior and shell tool 52 into two separate chambers 66 and 68..." The chambers correspond to first 60 and second 62 surface area portions of the shell tool 52 and represent the area where the main body skin portion 20 and air bag cover skin portion 22 will be found. Turning to FIG. 1, it is clear that the air bag cover skin 22 is formed within and corresponds to an opening in the main body skin portion 20.

It is submitted that the amendments to the claims herein, now particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

It is further submitted that the amendments to claims 1, 36, 52 and 88 are all fully supported by the specification, no new matter has been entered, and said amendments should be properly entered.

Turning to the rejections based upon the art, Applicants note that the claims have been rejected under 35 USC 103(a) as being anticipated by Yamasaki et al. (United States Patent No. 5,839,752). The Examiner also cited United States Patent No. 5,839,752 to Papandreou, et al. as a secondary reference in support of the rejections under 35 USC 103. Applicants herein respond as follows:

Turning to Yamasaki '752, Applicants appreciate that Yamasaki has been relied upon extensively by the Examiner, and therefore, a critical evaluation of its teachings is in order. As hopefully will be clear below, Yamasaki simply teaches the use of a decorative sheet for the entire surface of an instrument panel which sheet comprises "at least two layer". Col. 2, lines 1-2. This is an important distinction that Applicants would ask the Examiner to keep in mind. Yamasaki simply does **not teach an air bag cover skin portion surrounded by a main body**

skin portion.

It is therefore noted that Yamasaki relates to a **thermoformed air bag cover having multiple layers**, and the same skin composition across the **entire** surface of the panel. This is crystal clear upon review of FIG. 1 of the '752 patent which illustrates skin layer 13, foam layer 15 and barrier layer 14. There simply then is no question that Yamasaki '752 discloses and teaches that the skin layer 13 and underlying barrier layer 14 are the same at every point in the instrument panel and at the air bag opening, and do not define, a main body skin portion surrounding the air bag deployment portion of the panel, wherein the air bag deployment portion of the panel comprises an air bag cover skin portion that remains "substantially more ductile with decreasing temperature" (claim 1), or which comprises a "plastic material having a glass transition temperature lower than a glass transition temperature" of the main body skin portion (claim 52 and 88).

Expanding on the above, column 2 of Yamasaki '752, lines 1-2, recite "the decorative sheet comprises at least **two layers**". Further, it is believed that the Examiner is respectfully mistaken in identifying the main body skin portion as 13 and the air bag skin portion as 14 in '752 when they are clearly shown as two separate and non-connected and non-associated layers in FIG. 1, and there is no demarcation to identify such in FIGS. 3 and 4.

With this in mind, the Examiner's attention is directed to pending claim 1. The Examiner will note that said claim recites a main body skin portion adapted to cover at least a portion of the automotive interior panel **surrounding** the air bag deployment portion of the panel, the main body skin portion comprising a first plastic material including an opening corresponding to said air bag deployment portion said opening comprising an inner edge, and an air bag cover skin portion comprising an outer edge connected at said main body skin portion inner edge and adapted to cover the air bag deployment portion of the automotive interior panel. The claim goes on to recite a bond attaching the main body skin portion at said inner edge to the air bag cover skin portion at said outer edge.

Hopefully, it is now immediately clear to the Examiner that the principal reference relied

upon, Yamasaki '752, fails to teach or suggest anything resembling an automotive interior panel of a main body skin portion **surrounding** the air bag deployment portion of the panel and the bond attaching the main body skin portion to the air bag cover skin portion. Stated another way, nowhere in Yamasaki '752 is there any teaching or suggestion of a main body skin portion adapted to cover at least a portion of the automotive interior panel **surrounding** the air bag deployment portion of the panel, since Yamasaki '752 discloses and teaches that the upper skin layer 13 and lower barrier layer 14 are the same at every point on the instrument panel and at the air bag opening and form the layered decorative sheet 12 (column 3, lines 61-67).

Furthermore, and understandably, Yamasaki fails to teach or suggest anything remotely resembling a main body skin portion with an opening comprising an edge and an air bag cover skin portion connected at said edge. This is completely removed from Yamasaki's teachings, which, as the Examiner is aware, teaches that "the layers are the same at every point meaning the length and width". See Office Action of April 23, 2002, at page 6.

Applicants also note that in the Office Action of November 19, 2002 the Examiner noted that Yamasaki could be interpreted (FIGS. 1-2) to include an air bag deployment portion comprising a main body skin portion 13 having a first plastic material, and an air bag skin portion 14 having a second plastic material, a bond 15 attaching the main body skin portion to the air bag cover skin portion. The Examiner also commented that as shown in FIG. 2 of Yamasaki, the main body skin portion could be considered to include an opening "d" having an edge.

However, while that might be true, the claims have been amended to recite a main body skin portion including an opening corresponding to the air bag deployment portion, the opening comprising an inner edge, and an air bag skin portion comprising an outer edge **connected to said main body skin portion inner edge**, and a **bond** attaching the main body skin portion at said **inner edge** to the air bag cover skin portion at said **outer edge**. Accordingly, it is believed that this precludes a reading of the claim on Yamasaki, since the opening "d" in the main body skin portion does not attach to an inner edge of an air bag cover skin portion, and there is no

bond shown in FIG. 2 of Yamasaki connecting the edge shown therein to the outer edge of an air bag cover skin portion. Indeed, FIG. 2 of Yamasaki discloses that the pin holes 19, although partially plugged, remain opening to assist in airbag deployment. See Col. 4, lines 23-60. Accordingly, in that sense, it is submitted that Yamasaki teaches away from bonding anything to the edges depicted in the skin layer in his FIG. 2, in the sense that he relies upon the pinhole opening "d" in the skin layer to assist in air bag deployment.

Turning next to independent method claim 36, Applicants wish to point out that said claim requires a method of forming a skin for an automotive interior panel wherein the skin comprises a main body skin portion for covering most of the outer surface of the panel, and an air bag cover portion comprising an outer edge, wherein said main body skin portion includes an opening corresponding to said air bag cover skin portion, said air bag cover skin portion is **bordered at the outer edge by the main body skin portion for covering only an air bag deployment portion of the air bag cover panel.** The claim goes on to recite forming the air bag skin portion by casting a second plastic material against the second surface area of the heated shell tool corresponding to said opening in said main body panel.

Once again, Applicants want to point out that nowhere in Yamasaki '752 is there any teaching or suggestion of the formation of a skin comprising a main body skin portion for covering most of an outer surface of the panel **including an opening corresponding to said air bag deployment portion, said opening comprising an inner edge,** and an air bag cover skin portion comprising an outer edge, connected to said main body skin portion **at said inner edge** for covering only an air bag deployment portion. Once again, Yamasaki '752 disclose and teach that upper skin layer 13 and lower barrier layer 14 are the same at every point and in **layered** arrangement forming a decorative sheet 12 on the instrument panel and at the air bag opening.

The Examiner's attention is next directed to claim 52. As noted, claim 52 now recites a main body skin portion of a first plastic material adapted to cover at least a portion of the automotive panel including an opening corresponding the air bag cover skin portion of the panel, wherein said opening includes an inner edge, and an air bag cover skin portion of a second

plastic material connected at an outer edge to the main body skin portion, and wherein the second plastic material has a glass transition temperature that is lower than the glass transition temperature of the first plastic material. In a related manner, independent claim 88 recites a method for forming a skin for an automotive panel, the method comprising the steps of forming a main body skin portion of a first plastic material adapted to cover at least a portion of the automotive panel, including an opening corresponding to the air bag cover skin portion of the panel, said opening comprising an inner edge, and forming an air bag cover skin portion of a second plastic material which includes an outer edge, and wherein the second plastic material has a glass transition temperature that is lower than the glass transition temperature of the first plastic material, and connecting the main body skin portion inner edge and the air bag cover skin portion outer edge.

Accordingly, it should again be clear to the Examiner that there is simply no question that Yamasaki '752 fails to disclose or teach such features of Applicants' invention. Again, Yamasaki '752 discloses and teaches that the upper skin layer 13 and lower barrier layer 14 are the same at every point on the instrument panel and at the air bag opening and in layered arrangement forming a decorative sheet 12.

Applicants would again like to further expand upon the arguments noted above, as Applicant respectfully believes that the prior art of record simply does not teach or suggest the present invention as amended herein. Again, in the present invention, the first plastic material makes up the main body skin portion and the second plastic material makes up the air bag cover skin portion, both of which are visible to the occupant of the vehicle, and the edge of the air bag cover skin portion is connected to the edge of the main body skin portion. Therefore, the single layer of the air bag cover skin portion material above the air bag dispensing apparatus is different (either in ductility as recited in claims 1 and 36 or Tg as recited in claims 52 and 88) from the single layer of main body skin surrounding it. Such feature is entirely missing in Yamasaki '752, as Yamasaki '752 discloses and teaches that the upper skin layer 13 and the lower barrier layer 14 are the same at every point on the instrument panel and at the air

bag opening. The barrier layer 14 protects the skin layer 13 from injection molding of the base member 11 and a foaming layer 15 is disposed between the skin layer 13 and the barrier layer 14 (column 3, lines 61-67). Accordingly, critically examined, Yamasaki, et al. actually teaches away from the subject manner of the present invention.

Yamasaki, et al. also does not teach the use of a different plastic materials in the air bag deployment portion of the skin than in the main body portion. Yamasaki, et al. teaches vacuum forming (column 4, lines 61-65 of '752) of a trilaminate of a skin layer 13 of soft polyvinyl chloride, a foaming layer 15 of a foamed polypropylene and a barrier layer 14 of olefin thermoplastic elastomer (column 4, lines 15-20) (see also column 7, lines 12-17 of '752 and column 3, lines 60-67 of '752). Yamasaki would not be able to readily create by vacuum forming a construction as claimed by the Applicants wherein a main body skin portion of a first material surrounds and is bonded to an air bag cover skin portion of a second material. That is why the Applicants prefer to use casting or spraying the materials on a heated tool.

It is respectfully requested that the Examiner compare FIGS. 1 and 5 a, b, c, of '752 to FIGS. 8 and 9 of the present application, with the claim limitations in mind, to distinguish the difference. The FIGS. from '752 show a decorative sheet 12 comprising a skin layer 13, a barrier layer 14 and a foaming layer 15 disposed between (see Column 3, lines 61-67 for description). In contrast, FIGS. 8 and 9 of the present application show **two different skin portions 20 and 22 abutting one another**, made up of two different materials which are supported by a mold 52 and which are connected at their respective inner 38 and outer 40 edges by a plastic bond 25 which is applied in the gap 84, 86.

Turning to the secondary reference Papandreou, et al. (United States Patent No. 5,498,022), this reference is directed at a color coordinated dashboard assembly having a dashboard fabricated from a material having a first unfinished surface and an air bag gate means for covering an air bag assembly means, said air bag gate means fabricated from a material having a second unfinished surface and surface finishing means for **color finishing** said dashboard so that both first and second unfinished surfaces are the same color. Simply put, the

surface of the dashboard and air bag cover skin are painted with paint of the same color as the dashboard and air bag cover skin. Nothing teaches or suggest the limitations of, e.g., a main body skin portion surrounding the air bag deployment portion of the panel, wherein the air bag deployment portion of the panel comprises an air bag cover skin portion that remains “substantially more ductile with decreasing temperature” (claim 1), or which comprises a “plastic material having a glass transition temperature lower than a glass transition temperature” of the main body skin portion (claim 52 and 88).

It is also believed that the Examiner is mistaken in the interpretation of FIG. 1 of ‘022 as described in page 4 of the Office Action mailed November 19, 2002. **Reference number 22 is not an edge of a main body skin portion**, but rather “the **finishing material [i.e., paint]** on the surface of the substrate forming the dashboard is represented at 21. The ‘022 patent goes on to make clear that “[t]his may be Soft Suede paint and may be **grooved such as represented at 22**”. (See column 5, lines 1-3 of ‘022.). Furthermore, even assuming that the Examiner is correct, the features of claims 1, 36, 52 and 88, as noted above, are not present, with respect to the characteristics of the materials for the main body and air bag skin portion.

Finally, the Examiner points in page 6 of the Office Action mailed November 19, 2002, “Yamasaki, et al. in view Papandreou, et al. of discloses the claimed invention except for an overlap of the first plastic material and the second plastic material, as shown in FIGS. 4-8 of Gray, et al ‘935. As an initial matter, Gray et al (US 6,237,935) issued on May 29, 2001, and is based upon a filing date of August 3, 1998. The present application was originally filed on August 14, 1997, so it is not clear how Gray et al ‘935 is properly cited as a reference.

In addition, as noted above, it is not believed that Yamasaki in view of Papandreou teach or suggest the present invention. Specifically, it is not believed that Gray et al ‘935, and Figures 4-8 therein teach or suggest the various combined features of the claims as amended herein.

Included herein is a Marked Copy of the Amended Claims Showing Changes.

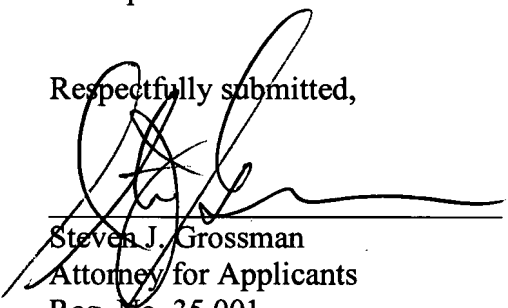
In consideration of the Amendments to the claims and the remarks hereinabove, Applicants respectfully submit that all of the objections and rejections raised by the Office

Action mailed November 19, 2002 have been overcome by the response. Accordingly, all claims currently pending in the application are believed to be in condition for allowance. Allowance at an early date is respectfully solicited.

In the event the Examiner deems personal contact is necessary, please contact the undersigned attorney at (603) 668-6560.

In the event there are any further deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No 50-2121.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service First Class Mail in an envelope addressed to: Commissioner of Patents, Washington, DC 20231 on February 19, 2003, at Manchester, New Hampshire.

By: Carol McCallum

Marked Copy of the Amended Claims Showing Changes

1. (Twice Amended) A skin for an automotive interior panel, the interior panel including an air bag deployment portion; the skin comprising:

a main body skin portion adapted to cover at least a portion of the automotive interior panel surrounding the air bag deployment portion of the panel, the main body skin portion comprising a first plastic material [and an opening comprising an edge] including an opening corresponding to said air bag deployment portion, said opening comprising an inner edge;

an air bag cover skin portion comprising an outer edge connected at said main body skin portion inner edge and adapted to cover the air bag deployment portion of the automotive interior panel, the air bag cover skin portion comprising a second plastic material having the property of remaining substantially more ductile with decreasing temperature than the first plastic material;

a bond attaching the main body skin portion at said inner edge to the air bag cover skin portion at said outer edge; and

an air bag deployment region disposed within the air bag cover skin portion and adapted to open with the air bag deployment door in response to the force of an inflating air bag.

36. (Twice Amended) A method of forming a skin for an automotive interior panel, wherein the skin comprises a main body skin portion for covering most of an outer surface of the panel [having an opening comprising an edge,] and an air bag cover skin portion comprising an outer edge, wherein said main body skin portion includes an opening corresponding to said air bag cover skin portion, said opening comprising an inner edge, wherein said air bag cover skin portion is bordered at the outer edge by the main body skin portion inner edge for covering [only] an air bag deployment portion of the air bag cover panel, the method comprising the steps of:

forming the main body skin portion by casting a first plastic material against a first surface area of a heated shell tool to form a first plastic skin casting to the desired shape of the

main body skin portion, and

forming the air bag cover skin portion by casting a second plastic material against a second surface area of the heated shell tool [bounded by the first surface area] corresponding to said opening in said main body skin portion to form a second plastic skin casting to the desired shape of the air bag cover skin portion, and

forming a bond at said inner edge of the main body skin portion and said outer edge of said air bag cover portion and attaching the main body skin portion and the air bag cover skin portion together while on the heated shell tool.

52. (Thrice Amended) A skin for an automotive panel comprising:

a main body skin portion adapted to cover at least a portion of the automotive panel and including an opening corresponding to [surrounding] an air bag skin portion of the panel, said main body skin portion further comprising a first plastic material, [and an] said opening comprising an inner edge; and

an air bag cover skin portion comprising an outer edge connected at said inner edge [to] of said main body skin portion, said air bag cover skin portion comprising a second plastic material having a glass transition temperature lower than a glass transition temperature of the first plastic material.

88. (Thrice Amended) A method of forming a skin for an automotive panel, the method comprising the steps of:

forming a main body skin portion adapted to cover at least a portion of the automotive panel including an opening corresponding to [and surrounding] an air bag skin portion of the panel, said main body skin portion further comprising a first plastic material, [and an] said opening comprising an inner edge;

forming an air bag cover skin portion comprising an outer edge, [at said edge] said air bag cover skin portion comprising a second plastic material having a glass transition temperature

lower than a glass transition temperature of said first plastic material; and

connecting said main body skin portion inner edge and said air bag cover skin portion outer edge together.